

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 106TVP01
Application No. 106

Issue Date: August 29, 2002
Expiration Date: September 28, 2007

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Chugach Electric Association, Inc.**, for the operation of the **Beluga River Power Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate 9423-AA013 have been incorporated into this Operating Permit.

This Operating Permit becomes effective September 29, 2002.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS.....	Alaska Statutes
ASTM.....	American Society for Testing and Materials
BACT	Best Available Control Technology
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
dscf.....	Dry standard cubic foot
EPA	US Environmental Protection Agency
gr./dscf.....	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH.....	gallons per hour
HAPs or HACs.....	Hazardous Air Pollutants or Hazardous Air Contaminants [<i>HAPs</i> or <i>HACs</i> as defined in AS 46.14.990(14)]
ID	Source Identification Number
kPa.....	kiloPascals
MACT	Maximum Achievable Control Technology
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [<i>NESHAPS</i> as defined in 40 C.F.R. 61]
NO _x	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [<i>NSPS</i> as defined in 40 C.F.R. 60]
ppm.....	Parts per million
PS	Performance specification
PSD	Prevention of Significant Deterioration
RM	Reference Method
SIC.	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH.....	Tons per hour
tpy.....	Tons per year
VOC	volatile organic compound [<i>VOC</i> as defined in 18 AAC 50.990(103)]
wt%	weight percent

Section 1. Identification

Names and Addresses

Permittee:	Chugach Electric Association, Inc. P.O. Box 196300 Anchorage, Alaska 99519-6300
Facility Name:	Beluga River Power Plant
Location:	Section 27, Township 13N, Range 10W
Physical Address:	40 miles West of Anchorage Anchorage, Alaska, Seward Meridian
Owner:	Chugach Electric Association, Inc. P.O. Box 196300 Anchorage, Alaska 99519-6300
Operator:	Same as Owner
Permittee's Responsible Official	Carl H. Harmon, Environmental Engineering Manager
Designated Agent:	Evan J. Griffith Chugach Electric Association, Inc.
Facility and Building Contact:	Carl H. Harmon Chugach Electric Association, Inc. (907) 762-4739
Fee Contact:	Carl H. Harmon Carl_Harmon@chugachelectric.com

Facility Process Description

SIC Code of the Facility: 4911 - Electric Services

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Nitrogen oxides (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter (PM-10), volatile organic compounds (VOCs), and hazardous air pollutants (HAPs).

Facility Classifications:

- (1) 18 AAC 50.300(b)(2)
- (2) 18 AAC 50.300(c)(1)

Operating Permit Classifications:

- (1) 18 AAC 50.325(b)(1)
- (2) 18 AAC 50.325(c)

Section 3. Source Inventory and Description

Sources listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

ID	Source Name	Source Description	Rating/size¹	Installation Date
1	GE Frame 5 Turbine	Power Unit No. 1	270 MMBtu/hr	1968
2	GE Frame 5 Turbine	Power Unit No. 2	270 MMBtu/hr	1968
3	GE Frame 7 Turbine	Power Unit No. 3	940 MMBtu/hr	1974
5	GE Frame 7 Turbine	Power Unit No. 5	940 MMBtu/hr	1975
6	Brown Boveri Turbodyne 11D4 Turbine	Power Unit No. 6	1,030 MMBtu/hr	1976
7	Brown Boveri Turbodyne 11D4 Turbine	Power Unit No. 7	1,030 MMBtu/hr	1977
9	Therm-Tec G-30M Incinerator	Solid Waste Incinerator	300 lb/hr	1991
10	CAT G-398 Natural Gas Generator	Backup AC Generator	450 Kw	1966

¹ Heat input rating for Source IDs 6 and 7 stated at 0° F.

Section 4. Emission Fees

- 1. Assessable Emissions.** The Permittee shall pay to the department an annual emission fee based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminants that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

- 1.1 the facility's assessable potential to emit of 7,084 tpy; or;
- 1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon the actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by:
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department.

[18 AAC 50.346(a)(1), 5/3/02 & 18 AAC 50.410, 1/18/97]

- 2. Assessable Emission Estimates.** The Permittee shall submit assessable emissions estimates as follows:

- 2.1 No later than March 31 of each year, submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795, including all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates, or;
- 2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit listed in condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02 & 18 AAC 50.410, 1/18/97]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment

- 3. Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source IDs 1 – 3, 5 – 7, 9 & 10 to reduce visibility through the exhaust effluent by either:

- a. more than 20 percent for more than three minutes in any one hour², or;
[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98; 18 AAC 50.350(d)(1)(C), 6/21/98]
- b. more than 20 percent averaged over any six consecutive minutes³.
[18 AAC 50.055(a)(1), 5/3/02; 18 AAC 50.350(d)(1)(C), 6/21/98]

- 3.1 For Source IDs 1 – 3 and 5 – 7, monitor, record and report as follows:

- a. The Permittee shall use only gas as fuel in Source IDs Source IDs 1 – 3, 5 - 7 & 10. The Permittee shall certify in each operating report required under condition 39 that the sources burned only natural gas.
- b. The Permittee shall report under condition 38 if any fuel is burned other than natural gas.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 3.2 For Source ID 9 and 10 monitoring shall consist of an annual compliance certification under condition 40 with the opacity standard.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 4. Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Source IDs 1 – 3, 5 – 7 and 10 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97 & 18 AAC 50.350(d)(1)(C), 6/21/98]

- 4.1 For Source IDs 1 – 3, 5 – 7, monitor, record and report as follows:

- a. The Permittee shall comply with conditions 3.1a and 3.1b.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 4.2 For Source ID 10 monitoring shall consist of an annual compliance certification under condition 40 with the particulate matter standard.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

² For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition and condition 13.a will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

³ The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

- 5. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Source IDs 1 – 3, 5 – 7, 9 & 10 to exceed 500 ppm averaged over three hours. Compliance with this condition shall be demonstrated by maintaining readily accessible records for the life of this permit showing that all supply contracts for natural gas used at the facility include a maximum hydrogen sulfide specification of 1.0 grain per 100 standard cubic feet of gas and 20 grains of sulfur per 100 standard cubic feet of gas.

[18 AAC 50.055(c), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]

- 6.** The Permittee shall burn only natural gas with an H₂S content not greater than 10 ppmv.

[Operating Permit No. 9423-AA013, amended 4/8/97]

6.1 Monitoring and Recordkeeping-

[18 AAC 50.350(g), 1/18/97]

- a. **Either** obtain a semiannual statement from the fuel supplier of the natural gas H₂S concentration in ppm, **or**
- b. Analyze a representative sample of the fuel semiannually to determine the H₂S concentration using colorimetric analysis (Sensidyne Gastec Detector Tubes or equivalent).
- c. Recordkeeping - Record the H₂S concentrations measured as required under conditions 6.1a or 6.1b.

[18 AAC 50.350(h - i), 1/18/97]

6.2 Reporting –

- a. Report as excess emissions, in accordance with condition 38, whenever any fuel combusted at the facility does not meet the H₂S specification in this condition.
- b. Submit copies of the records required by condition 6.1c with the facility operating report required by condition 39.

[18 AAC 50.350(i), 1/18/97]

- 7.** The Permittee shall ensure that the alarms and interlock system on Source IDs 3 and 5 are as described in Figure A below.

- 7.1 Monitoring and Recordkeeping -** The Permittee shall instruct all unit operators of the operating limit.

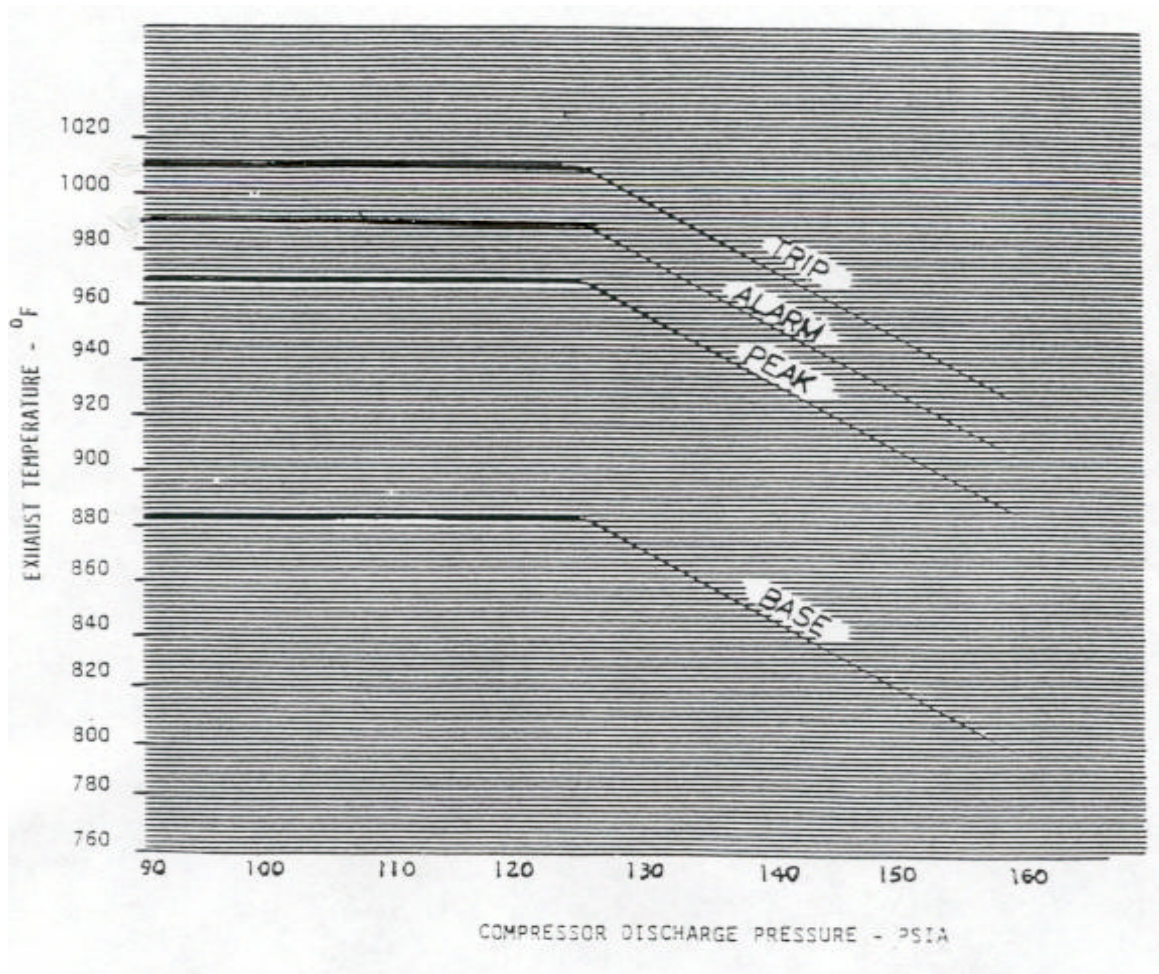
- 7.2 Report –** The Permittee shall report as excess emissions, in accordance with condition 38, whenever the operating conditions of source IDs 3 and 5 exceed the limits of the line marked “TRIP” in Figure A.

[Operating Permit No. 9423-AA013, amended 4/8/97]
[18 AAC 50.350(g) - (i), 5/3/02]

Figure A

OPERATIONAL ALARM AND LIMITATION CURVE
FOR GAS TURBINE GENERATING UNITS No. 3 and 5

Exhaust Temperature Control, Alarm and TRIP Limits
Vs
Expected Compressor Discharge Pressure
For Simple Cycle Operation



8. The Permittee shall install, operate, and maintain in good working order gas consumption meters on each Source IDs 1 – 3, 5 - 7 & 9 - 10. The meters shall have an accuracy of $\pm 5\%$.

[Operating Permit No. 9423-AA013, amended 4/8/97]

- 8.1 Monitoring and Recordkeeping - Record quantity of natural gas consumed in each Source IDs 1 – 3, 5 - 7 & 9 - 10, in million cubic feet per month.

[18 AAC 50.350(g - h), 5/3/02]

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- 8.2 Reporting – Include monthly summaries of the records required by condition 8.1 with the facility operating report required by condition 39.

[18 AAC 50.350(i), 1/18/97]

9. The Permittee shall install, operate, and maintain in good working order a continuous monitoring system for measuring kilowatt-hours and hours of operation on each Source IDs 1 – 3, 5 – 7, 9 & 10, except as provided in condition 9.1.

[Operating Permit No. 9423-AA013, amended 4/8/97]

- 9.1 Source ID 9 is subject only to monitoring, recordkeeping and reporting of hours of operation.

- 9.2 Monitoring and Recordkeeping – Monitor and record for each Source IDs 1 – 3, 5 – 7 & 10, the following:

- a. the number of hours operated per month;
- b. maximum one hour kilowatt/hour production per month;
- c. total power generated (kilowatt/hour) per month; and
- d. year-to-date total for each turbine.

[18 AAC 50.350(g) - (h), 5/3/02]

- 9.3 Reporting – Include monthly summaries of the records required by conditions 9.1 - 9.2 with the facility operating report required by condition 39.

[18 AAC 50.350(i), 1/18/97]

10. The Permittee shall estimate the pounds and type of waste incinerated each month in Source ID 9, and include the information in the facility operating report required by condition 39.

[Operating Permit No. 9423-AA013, amended 4/8/97]

[18 AAC 50.350(g) - (i), 5/3/02]

11. The Permittee shall operate Source ID 10 (generator) for no more than 24 hours per consecutive twelve-month period to ensure operational capacity and for routine maintenance.

[Operating Permit No. 9423-AA013, amended 4/8/97]

[18 AAC 50.350(g) - (i), 5/3/02]

- 11.1 Monitoring and Recordkeeping – Calculate each month the rolling 12 month total of hours operated in the previous consecutive twelve-month period.

- 11.2 Reporting - Report the rolling 12 month total of hours operated for each month of the reporting period with the facility operating report required by condition 39.

- 11.3 Report under condition 38 if the rolling 12 month total for any given month exceeds the limit in condition 11.

Section 6. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

- 12.** For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

12.1 the Permittee shall submit the compliance certifications of condition 40 based on reasonable inquiry;

12.2 the Permittee shall comply with the requirements of condition 22;

12.3 no other monitoring, record keeping, or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

- 13.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by either:

a. more than 20 percent for more than three minutes in any one hour⁴, or;

[18 AAC 50.050(a)(1) & 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

b. more than 20 percent averaged over any six consecutive minutes⁵.

[18 AAC 50.050(a) & 50.055(a)(1), 5/3/02]

- 14.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

- 15.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

⁴ See Footnote 2.

⁵ See Footnote 3

Section 7. Generally Applicable Requirements

- 16. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 1/18/97]
[40 C.F.R. 61, Subparts A & M, 12/19/96]

- 17. Good Air Pollution Control Practice⁶.** The permittee shall do the following for Source IDs 1 – 3, 5 – 7, 9 & 10:

- 17.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 17.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;
- 17.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.346(b)(2), 5/3/02]

- 18. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

- 19. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk material to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 1/18/97]

- 20. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g), 1/18/97]

- 21. Open Burning.** The Permittee shall comply with the following requirements when conducting open burning at the facility.

- 21.1 Open burning outside the lined training pits requires prior verbal approval from the DEC Air Quality office, telephone 1-907-269-3066.
- 21.2 Any excess wastewater, which will not be contained within the liner, shall be disposed of in accordance with 18 AAC 72.

⁶Condition 17 is enforceable only by the State until 18 AAC 50.346(b)(2), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

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- 21.3 Hazardous material and waste oil other than the hydrocarbons approved shall not be allowed in the burn. Spill cleanup equipment shall be on-site and any spill shall be cleaned up and reported to the DEC (18 AAC 75.300-307).
- 21.4 **Notification** (more than 20 gallons per session): The DEC shall be notified at least one day in advance of any planned burn of more than 20 gallons, telephone 1-907-269-3066. Your local FAA office and/or the Control Tower should be notified (if necessary), as well as local fire department(s). Public notification shall occur through the local news media (if present) at least three days prior to the burn (18 AAC 50.065 (j)), so that each advertisement shall have:
- a. permittee or other contact name;
 - b. contact's telephone number;
 - c. location of the burn;
 - d. type and approximate amount of fuel being burned.
- 21.5 Each series of burning occurrences must not exceed two hours of total burn time and must be separated by one hour, otherwise a burn schedule must be submitted.
- 21.6 Burning shall not be done during stagnant air conditions (fogs or inversions).
- 21.7 The burning shall comply with all local ordinances. This open burn approval does not exempt the activity from any other permit requirements. Please contact local authorities for more information.
- 21.8 Permittee shall submit an annual report to DEC due one month after the end of the calendar year. The report shall include the following information about each training session:
- a. date of the training session;
 - b. number of trainees;
 - c. total burn time (for each session);
 - d. type of fuel used;
 - e. the gallons of fuel used;
 - f. visual description of smoke transport and dispersal conditions, with approximate wind speed and direction;
 - g. list of complaints received concerning excess odors or smoke (if any), including name, phone number of complainant and any corrective action taken by the training facility [18 AAC 50.065(k)].

[Approval Number: Y012-SC042]
[18 AAC 50.065 & 18 AAC 50.335(g) – (h), 1/18/97]

22. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]

22.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 38.

22.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 22.

22.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if:

- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 22; or
- b. the department notifies the Permittee that it has found a violation of condition 22.

22.4 The Permittee shall keep records of:

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 22; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

22.5 With each facility operating report under condition 39, the Permittee shall include a brief summary report which must include:

- a. the number of complaints received;
- b. the number of times the Permittee or the department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

22.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a)(2) & 50.350(h) – (i), 5/3/02]

23. Permit Renewal. To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than **March 28, 2006** and no later than **March 28, 2007** to renew this permit.

[18 AAC 50.335(a), 1/18/97]

Section 8. General Source Testing and Monitoring Requirements

- 24. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.345(a) & (k), 5/3/02]

- 25. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:

25.1 at a point or points that characterize the actual discharge into the ambient air; and

25.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

- 26. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

26.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00]

[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97]

[40 C.F.R. 60, 7/1/99]

26.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 50.220(c)(1)(B) & 50.350(g), 1/18/97]

[40 C.F.R. 61, 12/19/96]

26.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00]

[18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]

[40 C.F.R. 63, 7/1/99]

26.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9.

[18 AAC 50.030, 12/30/00]

[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

26.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00]
[18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/99]

26.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[18 AAC 50.035(b)(2), 7/2/00]
[18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/99]

26.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c), 7/2/00]
[18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

27. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 18 AAC 50.350(g), 1/18/97 & 18 AAC 50.990(88), 5/3/02]

28. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/3/02]

29. Test Plans. Except as provided in condition 32, before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 24 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/3/02]

30. Test Notification. Except as provided in condition 32, at least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/3/02]

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- 31. Test Reports.** Except as provided in condition 32, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 34. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(a) & (o), 5/3/02]

- 32. Test Exemption.** The Permittee is not required to comply with conditions 25.2, 29, 30 and 31 when the exhaust is observed for visible emissions.

[18 AAC 50.345(a), 5/3/02]

- 33. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in conditions 4 and 14, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f) & 50.350(g), 1/18/97]

Section 9. General Recordkeeping, Reporting, and Compliance Certification Requirements

- 34. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.345(a) & (j), 5/3/02]

- 35. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

- 36. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by the permit. The department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.345(a) & (i), 5/3/02]

- 37. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

- 37.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
- 37.2 records of all monitoring required by this permit, and information about the monitoring including:
 - a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
 - b. sampling dates and times of sampling or measurements;
 - c. the operating conditions that existed at the time of sampling or measurement;
 - d. the date analyses were performed;
 - e. the location where samples were taken;

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- f. the company or entity that performed the sampling and analyses;
 - g. the analytical techniques or methods used in the analyses; and
 - h. the results of the analyses.

[18 AAC 50.350(h), 5/3/02]

38. Excess Emission and Permit Deviation Reports.

38.1 Except as provided in condition 22, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report:
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations:
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 38.1c(i);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 38.1c(i); and

38.2 When reporting excess emissions, the Permittee must report using either the department's on-line form, which can be found at www.dec.state.ak.us/awq/excess/report.asp, or, if the Permittee prefers, the form contained in Section 12 of this permit. The Permittee must provide all information called for by the form that is used.

38.3 When reporting a permit deviation, the Permittee must report using the form contained in Section 12 of this permit. The Permittee must provide all information called for by the form.

38.4 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.346(a)(3), 5/3/02]

39. Operating Reports. During the life of this permit, the Permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

39.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

39.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 39.1, either

a. The Permittee shall identify:

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date of such actions.

b. when excess emissions or permit deviations have already been reported under condition 38 the Permittee may cite the date or dates of those reports.

[18 AAC 50.346(b)(3), 5/3/02]

40. Annual Compliance Certification. Each year by March 31, beginning with the year following issuance of this permit, the Permittee shall compile and submit to the Department an original and two copies of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

40.1 For each permit term and condition set forth in Section 4 through Section 9, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous; and
- c. briefly describe each method used to determine the compliance status.
- d. notarize the responsible official's signature.

[18 AAC 50.345(a) & (j), 5/3/02]

40.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 10. Standard Conditions Not Otherwise Included in the Permit

- 41.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50 and, except for those terms or conditions designated in the permit as not federally-enforceable the Clean Air Act, and is grounds for:

41.1 an enforcement action;

41.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

41.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

- 42.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

- 43.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

- 44.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

44.1 included and specifically identified in the permit; or

44.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

- 45.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02]

- 46.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

- 47.** The Permittee shall allow the department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

47.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept;

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- 47.2 have access to and copy any records required by the permit;
 - 47.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and
 - 47.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

Section 11. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the Department not to be applicable to the Beluga River Power Plant.

Table 2 identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

Table 2 - Permit Shields Granted.

Non Applicable Requirements	Reason for non-applicability
Facility Wide	
Construction Permit for Source IDs 6 – 7	The 2000-01 upgrades to Source IDs 6 – 7 did not require a construction permit as determined by the Department in a letter dated June 13, 2000.
40 CFR 60 Subpart GG	The turbines at this facility were installed before the October 3, 1977, Subpart GG applicability date. The upgrades made to Source IDs 3, 6 and 7 since installation do not constitute a modification or reconstruction. See EPA's letter dated May 16, 1989; and the Department's letter June 13, 2000.
40 CFR 63.50 – 63.56	Facility is not major for HAPs.
40 CFR 82 Subpart B	Facility and its employees do not perform service on motor vehicle air conditioners, for consideration or otherwise.
40 CFR 82 Subpart F	Facility does not contain commercial, industrial, or comfort air conditioning appliances containing ozone-depleting substances used as refrigerant.
18 AAC 50.055(a)(2)-(a)(9)	The facility does not contain any sources subject to these opacity standards.
18 AAC 50.055(b)(2)-(b)(6)	The facility does not contain any sources subject to these particulate standards.
18 AAC 50.055(d)-(f)	The facility does not contain any sources subject to these sulfur standards.
18 AAC 50.070	Facility contains no marine vessels.
18 AAC 50.075	The facility sources do not contain any wood-fired heating devices.

[18 AAC 50.350(l), 1/18/97]

Section 12. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Chugach Electric Association, Inc.

Company Name

Beluga River Power Plant

Facility Name

Reason for notification:

☒ **Excess Emissions**

If you checked this box

Fill out section 1

☐ **Other Deviation from Permit Condition**

If you checked this box

fill out section 2

When did you discover the Excess Emissions or Other Deviation:

Date: __/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock):

	START Time: (hr:min):	END Time:	Duration
Date: _____	_____:	_____:	_____:
Date: _____	_____:	_____:	_____:
		Total:	_____:

(b) Cause of Event (Check all that apply):

<input type="checkbox"/> START UP	<input type="checkbox"/> UPSET CONDITION	<input type="checkbox"/> CONTROL EQUIPMENT
<input type="checkbox"/> SHUT DOWN	<input type="checkbox"/> SCHEDULED MAINTENANCE	<input type="checkbox"/> OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

† YES † NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

† YES † NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation
_____	_____
_____	_____
_____	_____

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:

Signature:

Date:

Alaska Department of Environmental Conservation
Air Permits Program

August 29, 2002

Chugach Electric Association, Inc.
Beluga River Power Plant

STATEMENT OF BASIS
of the terms and conditions for
Permit No. 106TVP01

Prepared by Cynthia Espinoza

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 106TVP01.

FACILITY IDENTIFICATION

Section 1 contains information on the facility as provided in the title V permit application. This facility is a power generation plant with six natural gas-fired turbine generator sets, one waste heat recovery unit (steam unit), a solid waste incinerator, and a natural gas backup generator. The facility also utilizes several gas-fired heaters and diesel-fired engines. This facility is classified under SIC code No. 4911, electric, gas and sanitary services.

Natural gas is supplied to the facility via pipeline from the Beluga gas suppliers. Once received by Chugach, the gas is scrubbed by one of the three scrubber trains before distribution to the Beluga River Power Plant combustion equipment.

The facility is owned and operated by Chugach Electric Association, Inc., and Chugach Electric Association, Inc. is the Permittee for the facility's operating permit.

SOURCE INVENTORY AND DESCRIPTION

Table 1 contains information on the sources at the facility as provided in the application. The source inventory was revised to remove three sources. One source is a waste heat recovery unit, which is not regulated by the State of Alaska. The other two sources are diesel storage tanks with a capacity of 10,000 gallons, which are insignificant.

The major sources at this facility are six turbines that burn gas fuel only, and were installed or commenced construction between 1968 and 1977. These six turbines were installed before the 40 C.F.R. 60, Subpart GG applicability date (October 3, 1977). In 1988, turbine generator # 3 was modified as indicated in condition 6 of this statement of basis. In 1995, gas turbine generator # 4 was decommissioned. The unit was a Pratt Whitney Worthington GG3C-4 which was installed in 1976 and had a generating capacity of 10 MW.

The solid waste incinerator (Source ID 9) is considered insignificant based on actual emissions data provided by the Permittee, which shows emissions less than the threshold values for regulated air contaminants set out in 18 AAC 50.335(r). However, it is still included in Table 1 because of the MR&R conditions that are carried forward from the previous operating permit number 9423-AA013 as required by 18 AAC 50.350(d)(1)(D).

Table 1 describes the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Table A contains emission information as provided in the application. A summary of the potential to emit (PTE)⁷ from the Beluga River Power Plant is shown in the table below.

Table A - Emissions Summary, in Tons Per Year (tpy)

Pollutant	NO _x	CO	PM-10	SO ₂	VOC	HAPs	Total
PTE	5,614.9	1,163.5	160.2	51.8	93.1	12.85	7,096
Assessable PTE	5,614.9	1,163.5	160.2	51.8	93.1	0	7,084

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 tpy.

The PTE for the five criteria pollutants were calculated using AP-42 emission factors. The PTE for HAPs were provided by the Permittee, based on AP-42 emission factors, with one exception. The turbine emission factor for formaldehyde is based on emission testing of Units No. 6 and No. 7. The amount of HAPs shown in Table A is the aggregate of all contaminants with no single contaminant equal to or greater than 10 tpy.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 includes a description of the regulatory classifications of the Beluga River Power Plant. This facility is classified under 18 AAC 50.300(b)(2) as having the potential to violate one or more of the ambient air quality standards because it contains fuel-burning equipment with a rated capacity of 100MMBtu/hour or more. It is also classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300(c)(1), because it has a potential to emit 250 tons per year (tpy) or more of a regulated air contaminant. However this facility has not gone through a PSD review.

This facility requires an operating permit under 18 AAC 50.325(b)(1) and 18 AAC 50.325(c) because it has the potential to emit more than 100 tpy of a regulated air contaminant and is within the category of facilities subject to AS 46.14.130(b)(4).

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to Beluga River Power Plant, the state regulations require a description of:

⁷ *Potential to Emit* or *PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources with the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including the limitations such as restrictions on hours of rate of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.

-
- ? Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies under 18 AAC 50.335(e)(4)(A);
 - ? Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under 18 AAC 50.335(e)(4)(C);
 - ? Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and
 - ? Sources subject to requirements in an existing Department permit 18 AAC 50.335(e)(5).

The emission sources at Beluga River Power Plant classified as “regulated sources” according to the above Department regulations are listed in Table 1 of Operating Permit No. 106TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9423-AA013. This permit-to-operate include all authorizations issued through October 1, 1996, and was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described below.

Construction Permits

No construction permits have been issued for this facility after January 18, 1997 (the effective date of the new divided operating and construction-permitting program).

Title-V Operating Permit Application History

The owner or operator submitted an application on November 7, 1997.

Additional information was received in November 2001.

COMPLIANCE HISTORY

The facility has operated at its current location since 1968. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior permit. The table below lists the permit condition that established a requirement in Operating Permit No. 9423-AA013 and the new condition in Operating Permit No. 106TVP01 that carries the old requirement into the new permit.

Table B - Comparison of Pre-January 18, 1997 Permit No. 9423-AA013 Conditions to Operating Permit No. 106TVP01 Conditions⁸

Permit No. 9423-AA013 Condition number	Description of Requirement	Permit No. 106TVP01 Condition Number	How condition was revised
Exhibit A	Source Inventory	Section 3	Source inventory was modified to remove Source ID 8 because is a waste heat recovery unit not regulated. Source IDs 11 - 12 are tanks with 10,000-gallon capacity storing diesel and are therefore insignificant.
Exhibit B	Burn natural gas only in Source IDs 3 – 7, 9, & 10 with an H ₂ S limit of 10 ppmv	6 and 8	Requirements were carried forward and include Source IDs 1 – 2.
Exhibit D	Report lb/month and type of waste from Source ID 9	10	Requirement was carried forward.
4	Operate Source ID 10 no more than 24 hrs/yr	11	Condition was carried forward.
5 and Exhibit B	Not burn more than 3.43 Mgal of distillate oil/yr in Source IDs 1 - 2	none	Condition rescinded because distillate fuel facilities were never installed. Turbines exclusively fire natural gas.
6 and Exhibit B	Distillate oil sulfur limit of 0.15% wt. in Source IDs 1 - 2	none	Condition rescinded because distillate fuel facilities were never installed. Turbines exclusively fire natural gas.
7 and Exhibit F	Alarms and interlock system requirements for Source ID 3	7	Condition was carried forward.
13 and Exhibit C	Process monitors shall be installed, operated, and maintained	8 – 9	Fuel consumption, operating hours and kilowatt-hours requirements were carried forward.

⁸ This table does not include all standard and general conditions

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Legal Basis: The state and federal regulations for each condition are cited in Operating Permit No. 106TVP01.

Conditions 1 - 2, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under 18 AAC 50.250(h)(1)(A) means the potential to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE).

The PTE set forth in the condition is based on fuel gas with a sulfur content of 10 ppm H₂S by volume. If the actual sulfur content of the fuel is greater than this assumption, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content.

Condition 3, Visible Emissions Standard

Applicability: The visible emission standard applies to operation of all fuel-burning equipment in Alaska. Source IDs 1 – 3, 5 – 7, 9 & 10 are gas-fired fuel-burning equipment.

Factual basis: This condition requires the Permittee to comply with the state visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate these standards. The Permittee shall not cause or allow the equipment to violate this standard.

This condition has recently been adopted into regulation as a standard condition.

Gas Fired:

Monitoring – The monitoring of gas fired sources for visible emissions is waived, i.e. no source testing will be required. The department has found that natural gas fired equipment inherently has negligible PM emissions. However, the department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Condition 4 , Particulate Matter (PM) Standard

Applicability: The PM standard 18 AAC 50.055(b)(1) applies to operation of all industrial processes or fuel burning equipment in Alaska. Source IDs 1 – 3, 5 – 7 & 10 are fuel-burning equipment. The SIP standard for PM applies to all industrial processes and fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual basis: Condition 4 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

The incinerator, Source ID 9 is not subject to the particulate matter standard because it has a rated capacity of less than 1000 pounds per hour.

Gas Fired:

Monitoring – The monitoring of gas fired sources for particulate matter is waived, i.e. no source testing will be required. The department has found that natural gas fired equipment inherently has negligible PM emissions. However, the department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Conditions 5 - 6, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. Source IDs 1 – 3, 5 – 7, 9 & 10 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983. Monitoring of sulfur dioxide emissions is accomplished by analysis of fuel sulfur content.

Factual basis: The condition requires the Permittee to comply with the sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Monitoring - Fuel Gas: Fuel gas sulfur is measured as hydrogen sulfide (H₂S) concentration in ppm by volume (ppmv). Calculations⁹ show that fuel gas containing no more than 4000 ppm H₂S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO₂ concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H₂S concentration of even 10 percent of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Condition 6 requires the Permittee to burn only natural gas, in addition to the waste, in the incinerator. The intent is to preclude oil-firing.

The 10 ppmv H₂S limit for natural gas is carried forward from previous Operating Permit No.9423-AA013

Recordkeeping - The Permittee is required to record the H₂S concentration of the fuel gas.

Reporting – The Permittee is required to report as “state” excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition.

The Permittee is required to include copies of the fuel gas H₂S concentration records with the facility operating report.

Condition 7, Operational Parameters for Source IDs 3 and 5 (Turbine Power Unit No. 3)

Applicability: These requirements apply because they were established in previous Permit No. 9423-AA013 to avoid PSD review.

Factual basis: Source ID 3 had blade replacements in 1988, which had the potential to increase the maximum emissions from this unit. The Permittee requested operational limits for Source ID 3 in a letter dated March 13, 1989, addressed to the EPA, limiting Source ID 3 to the same rating and emissions as before the blade replacements in 1988, to assure that the unit is not subject to NSPS, or PSD review.

In an email dated November 26, 2001, the Permittee asserted that Source ID 5 is subject to same operational parameters as Source ID 3.

The operational parameters of Figure A of this permit, limit Source ID 3 to ensure the blade replacement does not result in increase of NO_x emissions.

Conditions 8 - 9, Continuous Emission and Process Monitoring Requirements

Applicability: These requirements apply because they were established in previous Permit No. 9423-AA013.

Factual basis: Condition 6 requires the Permittee to burn only natural gas, as required in the previous operating permit. Conditions 8 and 9 require the Permittee to monitor, record and report natural gas consumption, operating hours, and kilowatt-hours of Source IDs 1 – 3,

⁹ See ADEC Air Permits Web Site at <http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>, under “Stoichiometric Mass Balance Calculations of Exhaust Gas SO₂ Concentration.”

5 - 7 & 9 – 10, with the exception of Source ID 9 which is subject only to monitoring, recordkeeping and reporting of hours of operation.

Condition 10, Incinerator (Source ID 9) Requirements

Applicability: These requirements apply because they were established in previous Permit No. 9423-AA013.

Factual basis: Condition 10 requires the Permittee to monitor, record and report pounds and type of waste incinerated per month in Source ID 9.

Condition 11, Natural Gas Generator (Source ID 10) Limit

Applicability: These requirements apply because they were established in previous Permit No. 9423-AA013.

Factual basis: The Permittee requested operation limits to restrict total operational hours of the natural gas generator to 24 hours per year, in order to not significantly increase the facility's air contaminant emissions, as established in the amendment to air permit No. 9123-AA012, issued October 12, 1993. The restriction is for routine operation and does not prohibit its use in the case of an emergency. However, the Department must be notified of such an emergency as stipulated in condition 38.

Conditions 12 - 15, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual basis: Conditions 12 through 15 require the Permittee to comply with the general standards for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

In accordance with the recently adopted regulations, 18 AAC 50.346(b)(1), 5/03/02, standard operating condition for Insignificant Sources also applies to sources that do not have control equipment for complying with an emissions standard or reducing emissions below a threshold in 18 AAC 50.335(r). This case applies to Source ID 9, the MR&R being that the unit remains in compliance with the conditions (8 - 10) carried forward from the previous Operating Permit No. 9423-AA013 and an annual compliance certification.

Condition 16, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 17, Good Air Pollution Control Practice

Applicability: Applies to all sources.

Factual basis: This condition has recently been adopted into regulation as a standard condition.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate much more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Records should be kept and available to the department. Records of deferred maintenance can be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the Permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or don't relate to minimizing emissions, the Permittee can see that they are changed as a condition of purchase for existing equipment.

Condition 18, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 19, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Reasonable precautions to prevent fugitive dust requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility. This condition applies to operating permits for facilities that do not have an approved dust control plan, and contain one of the following sources: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted facility or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Not all facilities have the potential to generate fugitive dust during the life of the permit. The Department will determine whether precautions are reasonable based on a variety of factors, including the distance to the facility boundaries, nature and content of the dust, proximity to

neighbors, and the nature of the activity. This condition applies to the types of sources or activities that are likely to generate fugitive dust as identified above. It allows the precautions that are identified under the permit to be appropriate and specific to the activities conducted by the Permittee.

If the Department determines that the facility has a minimal potential to generate fugitive dust, no monitoring, recordkeeping or reporting will be required.

Condition 20, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 21, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

These requirements are necessary to ensure that the State Ambient Air Quality Standards are met to protect public health and to avoid the occurrence of complaints from local residents.

The Department issued an air quality control approval to open burn at the Beluga River Power Plant. Approval Number: Y012-SC042 expires on September 1, 2006.

Condition 22, Air Pollution Prohibited

Applicability: These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.

Factual Basis: The underlying regulations are 18 AAC 50.110 and 18 AAC 50.346. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Condition 23, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The Permittee is required to submit a complete application for permit renewal by the specific dates applicable to Beluga River Power Plant as listed in this condition. Beluga River Power Plant. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

Condition 24, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test, and no recordkeeping or reporting requirements are necessary to ensure compliance with this condition.

Conditions 25 - 27, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source test as set out in conditions 25 - 27. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 31 adequately monitor compliance with conditions 25 - 27, therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

Conditions 28 - 32, Test Deadline Extension, Plans, Notification, Reports & Exemption

Applicability: Apply when the Permittee is required to conduct a source test.

Factual Basis: The underlying regulations are 18 AAC 50.345(l) – (o). The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50. Because these standard conditions supplement specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required. The source test itself is adequate to monitor compliance with this condition.

Condition 33, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. The Permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required to ensure compliance with this condition.

Condition 34, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the

reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 35, Submittals

Applicability: Applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 36, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Receipt of the requested information is adequate monitoring.

Condition 37, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional MR&R is required.

Condition 38, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two State regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the Department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition.

Table C - List of State Excess Emission Reporting Requirements¹⁰

Condition	Description
3.1b	if any fuel is burned other than natural gas
6.2a	whenever any fuel combusted does not meet the H ₂ S standard set out in condition 6
7.2	whenever the operating conditions of Source ID 3 exceed the limits of the line marked "TRIP" in Figure A
11.3	if the calculated consecutive twelve-month period in a given month exceeds the limit in condition 11
22.1 & 38.1a(i)	any time emissions present a potential threat to human health or safety
38.1a(ii)	excess emissions that the Permittee believes to be unavoidable
38.1c(i)	report within 30 days of the end of the month in which the emissions or deviation occurs
38.1c(ii)	if a continuous or recurring excess emission is not corrected within 48 hours of discovery, report within 72 hours of discovery

Condition 39, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Table D - List of Documents to be Attached to the Facility Operating Report¹¹

Condition	Parameter	Description
6.2b	H ₂ S	copies of the records of H ₂ S concentrations measured
8.2	Fuel Consumption	quantity of fuel gas burned in million cubic feet per month for each source
9.3	Hours & Kilowatt-hours	Monthly records for each source of operating hours, maximum one hour production, total power generated (kilowatt/hour), and year-to-date total for each source
10	Waste	estimated pounds and type of waste incinerated each month in Source ID 9

¹⁰ This table is for informational purposes. It does not relieve the Permittee of any requirements stated in Operating Permit 106TVP01.

¹¹ See footnote 10.

Condition	Parameter	Description
3.1a	Fuel gas	certification that the sources burned only natural gas
11.2	Hours	summary of calculated hours operated for the previous consecutive twelve-month period for each month
12	Source ID 9 actual emissions	if Source ID 9 has actual emissions greater than any of those thresholds set out in 18 AAC 50.335(r).
22.5	complaints	summary of complaints received
39.2	excess emissions or permit deviations	summary of excess emissions or permit deviations during the reporting period that are not reported under condition 39.1

Condition 40, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no MR&R is needed.

Conditions 41 - 47, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Section 11, Permit Shield

Applicability: Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Section 11 sets forth the requirements that the Department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

The table below identifies application shield requests that were denied, and the reason they were denied.

Table E - Permit Shields Denied

Applicable Requirements	Reason for Denial
AQC Permit 9423-AA013, conditions 1 – 3 & 5 - 20	Each facility-specific requirement established in a permit issued before Jan 17, 1997 must be included [18 AAC 50.350(d)(1)(D)].

Applicable Requirements	Reason for Denial
AQC Permit 9423-AA013, Exhibits A, B, C, D, E, and F	Each facility-specific requirement established in a permit issued before Jan 17, 1997 must be included [18 AAC 50.350(d)(1)(D)].
18 AAC 50.045(d)	This requirement applies to all facilities in the State of Alaska.

Removal of Credible Evidence condition from Draft Operating 106TVP01

18 AAC 50.345 – Credible Evidence – Proposed Subsection (p)

The comments were received during the three public comment periods on proposed standard conditions for Title V operating permits.

Comment

Commentators stated that the proposal goes beyond the Clean Air Act because EPA limited their credible evidence provisions so that they do not apply generally through Title V.

Commentators say that other states do not use credible evidence statements in their permits to support their monitoring conditions. Oregon DEQ is given as an example.

Response

The department has not adopted the proposed subsection because we have determined that it is not necessary, as described below:

The department does not need this statement regarding compliance certifications. Compliance certifications must already be certified with a notarized signature as true, accurate, and complete based on reasonable inquiry.

The department also does not need to adopt the statement that nothing in a permit precludes the use of any credible evidence for establishing whether or not the Permittee has violated or is in violation of any standard. This is already true under the Alaska's rules of evidence, and nothing in this permit program changes that fact. It is with this understanding that the department has decided not to adopt the proposed subsection (p).

To comply with regulations under the Clean Air Act, Alaska's program must not preclude the use of any credible evidence for determining compliance with any requirements of 40 C.F.R. 60 or 61, or the State Implementation Plan. The department has specifically incorporated this concept in its adoption by reference of the Subparts A of 40 C.F.R. 60 and 61. This requirement as it appears in 40 C.F.R. 51 (governing state implementation plans) is satisfied because the use of any credible evidence is not precluded by Alaska's rules of evidence or this permit program.

Alaska's monitoring conditions are sufficient because the department also has the ability to use other credible evidence.